

REMARKS**I. Status of the Claims**

Claims 25-33, 35-38 and 50-55 are currently pending in the application. Claims 37 and 38 are withdrawn from consideration.

II. Rejection under 35 U.S.C. § 103

The Examiner has rejected claims 25-28, 30-32, 35, 36, and 50-55 as obvious over U.S. Patent 5,019,096 to Fox et al. in view of JP 7082665 to Zeneka et al, stating that Fox provides coated medical articles to provide surface infection resistance, and that the binding is so strong that the silver and chlorhexidine are not release and that Fox shows adherent coating of gloves with the combination of silver and biguanides. The Examiner further states that Zenea uses crosslinked biguanides in coating of bedding articles which provide surfaces with infection resistance.

Applicants respectfully traverse. Fox teaches a coating that releases antimicrobial agents “over an appreciable period of time” (see col. 4:35-36). The release of biocidal amounts of elutables is a *desirable* characteristic of the Fox materials; the preferred period of time for release is from about 12 to in excess of 21 days. The Fox materials also develop a “zone of inhibition” which extends, e.g., 18 – 27 mm away from the object (see Example 16, col.29). The only way the “zone of inhibition” can be created is by the release of biocidal amounts of elutables from the coating. Further, Fox states that “equally important to the invention is the coating agent’s ability to absorb and release, in a controlled-dosing manner, bio-active agents” (col. 7:28-30). Therefore, Fox does not teach an antimicrobial coating that does not release biocidal amounts of elutables into the surrounding environment. The Fox coatings are functionally different from those of the claimed invention.

Further, the coating material Fox teaches include biomedical polyurethane (a non-ionic polymer), biomedical silicone (rubbers and elastomers containing Si-O-Si moieties, not nitrogen-containing moieties) and biodegradable polymers (polymers which, by definition, degraded over time and are therefore can not form adherent antimicrobial coatings). This focus on polyurethane and the property allowing release of antimicrobial agent over time teaches away from the current invention. None of the coating materials taught by Fox comprise a nitrogen-containing polycationic polymer matrix of the claimed invention.

- The Examiner states that Fox teaches that antimicrobial agents such as Ag or CHA, when mixed with latex, the binding is so strong that ions of the antimicrobial agent are restricted in their ability to diffuse out of the matrix. (col 9:27-31). However, Fox does not teach that this is a desirable characteristic. Fox teaches the advantage of using bioactive agents that are absorbed and released by polymers, not bioactive agents in matrix that restricts diffusion. Further, latex is not a polycationic polymer, and the combination of a non-polycationic polymer with Ag and/or CHA to create a non-eluting system is not an aspect of the current invention.

Fox states that some polyurethanes have a cationic charge, and do not react with cationic antimicrobial agents such as Ag or CHA (col 9:31-33). However, the use of polyurethanes that do not react with microbial agents would not be effective in the preparation of an antimicrobial coating. Additionally, Fox does not provide any example or teaching of biomedical polyurethanes that carry a positive charge; Fox describes this in a single sentence. Instead, the emphasis of Fox is on polymers that absorb and release bioactive agents. This statement can not be considered enabling.

The Examiner pointed out that Fox does show an adherent coatings of gloves with the combination of silver and biguanides (col 15: 1-3). However, since the Fox patent emphasizes the desirability of release of antimicrobial compounds in its polymer matrices, the disclosed biguanide and silver salt in the coatings as must also be assumed to release biocidal amounts of elutables into the surrounding environment. These additional agents are including in the teaching of using “compatible ingredients to advantage” (col 14:49). The advantages taught in the specification are

those obtained by absorbing and releasing active agents. Consequently, Fox teaches away from the claimed invention.

Zeneka teaches using biguanides in coating of bedding articles (fibers) having high washing durability, but fails to teach the use of biguanides in combination with a metal. However, this teaching can not be combined with Fox because Fox teaches away from using polymers that do not release biocidal amounts of elutables and there therefore can be no motivation to combine the references. Further, there is no disclosure in Zeneka that teaches or suggests the inclusion of a metallic material in the Zeneka cross-linked polymer coatings would result in a non-eluting system.

Therefore, Fox cannot be properly combined with Zeneka since one of ordinary skill of the art would have no motivation to combine Zeneka and Fox to obtain a system comprising a polycationic polymer that fails to release biocidal amounts of elutables into the surrounding environment. Accordingly, reconsideration and withdrawal of the present rejection is respectfully requested.

Double-Patenting

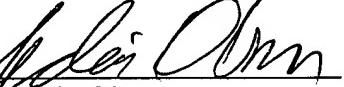
All claims have been rejected by the Examiner under the judicially created doctrine of obviousness-type double-patenting as being allegedly unpatentable over various claims in commonly-owned U.S. Patent 5,849,311.

In response, it is submitted that a terminal disclaimer will be timely filed upon allowance of any conflicting claims in the instant application.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

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Respectfully submitted,

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